Whatis Claimed is:

1. A device for processing a material web, comprising:

a machine base member; and

a sonotrode supported in a housing,

wherein the housing is joined to the machine base member by at least one flexible element.

2. The device as recited in claim 1, wherein the flexible element is made of a non-conducting material.

3. The device as recited in claim 2, further comprising a metallic counter-element which is positioned to form a processing gap between a surface of the counter-element and a processing end of the sonotrode.

4. The device as recited in claim 1, wherein the housing is joined to the machine base member by at least one flat spring element.

5. The device as recited in claim 4, wherein the flat spring element is preloaded in a normal position of the housing.

6. The device as recited in claim 4, wherein at least two flat spring elements, preloaded by bend-loading deflection, join the housing to the machine base member, and one flat spring element is deflected in the opposite direction with respect to a second flat spring element.

7. The device as recited in claim 1, wherein at least one strain gauge is mounted on the flexible element for ascertaining at least one of a bending load and a stretching load of the flexible element.

8. The device as recited in claim 7, wherein strain gauges are arranged on two opposite surfaces of a flat spring element.

9. The device as recited in claim 1, further comprising a piston-cylinder unit that is joined to the housing for applying a contact pressure or for adjusting the position of the sonotrode, and which has a roller diaphragm.

10. A method for controlling at least one of a position and a contact pressure of a sonotrode of a device for processing a material web, the device having a machine base member, a sonotrode supported in a housing and a loading device acting one of directly and indirectly on the sonotrode for producing changes in one of a position and a contact pressure of the sonotrode, where the housing is joined to the machine base member by at least one flexible element, and measuring means are provided on the flexible element for ascertaining the bending load of the flexible element, the method comprising the steps of:

ascertaining information, by the measuring means, about the bending load of the flexible element; and

using said information for controlling the loading device.

11. A method for ascertaining at least one of a position and a contact pressure of a sonotrode of a device for processing a material web moving in a processing gap, the device having a machine base member, a sonotrode supported in a housing and a loading device acting one of directly and indirectly on the sonotrode for producing changes in one of a position and a contact pressure of the sonotrode, where the housing is joined to the machine base member by at least one flexible element, and measuring means are provided on the flexible element for ascertaining the stretching load of the flexible element, the method comprising the steps of:

ascertaining, by the measuring means, information about one of a

different stretching load of a block-type flexible element and a different stretching load of individual flexible elements along the longitudinal axis of the sonotrode; and

using said information for ascertaining at least one of the position and the contact pressure.

12. A method for monitoring the treatment of a material web moving in a processing gap of a device having a machine base member, a sonotrode supported in a housing and a metallic counter-element that is positioned to form the processing gap between a surface of the counter-element and a processing tip of the sonotrode, where the housing is joined to the machine base member by at least one non-conducting flexible element, the method comprising the step of meauring the electrical resistance between the sonotrode and the counter-element.